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Allina Health

Care Management Strategy Improves the Lives of Stroke Patients

BACKGROUND

Stroke takes a devastating toll on those who experience it. On average, one American dies from stroke every 4 minutes with more than 795,000 deaths annually.[1] For survivors, rehabilitation is notoriously difficult. Stroke is a leading cause of serious long-term disability,[2] while hospital readmission ranges from 20 percent to 27 percent of stroke victims the first year.[3]

In 2013, Allina Health created a rehabilitation care coordination model within Courage Kenny Rehabilitation Institute to provide heightened support and better care management for high-risk patients with different conditions, including stroke—a common cause of hospitalization within the Allina Health System.

THE IMPORTANCE OF CARE MANAGEMENT FOR POST-STROKE PATIENTS

The needs of individuals who experience stroke are complex and challenging.

Upon discharge from the hospital, individuals may not realize maximum improvement due to factors such as missed appointments, non-adherence to medication, or delays in receiving outpatient therapies. It became clear to CKRI leadership that post-stroke patients needed strong care management during key transitions - after discharge from the hospital to the home, and after discharge from rehabilitation to outpatient care and community support

services. It also believed that stroke survivors would benefit from increased education about their condition and care needs.

Finally, considerable data was needed—but not easily captured—to enable post-stroke functional measurements such as data from the Berg Balance scale, the Berg Fall risk and the Mann assessment of swallowing ability.

CARE MANAGEMENT AND BETTER DATA IMPROVE STROKE RECOVERY OUTCOMES

CKRI ultimately created a holistic program for stroke survivors that delivers seamless care across inpatient, outpatient, and community support services, enabled by access to comprehensive data. Strong leadership spearheaded the program's implementation, including a Stroke Advisory Committee that regularly met to oversee the process. Other components included:

- **Increased education.** CKRI created several post-stroke programs for both providers and patients. These included educational videos for patients and families, peer visitors, story sharing, and groups tailored especially for young stroke patients.

- **Assigned care manager.** Secured grant funds to pay for this role, filled by an experienced registered nurse. She is a critical member of the care team, helping individuals and their caregivers understand and navigate through what can be a complex delivery

> "We have seen an exciting evolution in care for stroke patients, from care in "silos" to highly integrated and managed care across the entire continuum. Better outcomes shows this new model works."
>
> Diane Chappuis, MD , Medical Director of Stroke Rehabilitation, Allina Health

system. She is available from diagnosis through treatment, working with a care guide and a social worker who collaborate in managing the patient's support needs.

> **Strengthened relationships between inpatient teams and rehab care support services.** All clinical care and rehabilitation services, such as occupational, speech, and physical therapies, are now carefully coordinated to assure stroke care is delivered when and where it needed, most efficiently.

> **Data analytics platform.** CKRI also implemented a data warehouse and analytics platform from Health Catalyst®, a project that integrated clinical, demographic, cost, claims and patient functionality data from across the enterprise. This gave clinicians powerful new capabilities:

>> Can now identify and target high risk patients as soon after admission as possible for coordinated stroke care

>> Prove value of care management model through improved outcomes (Berg Balance Scale, Berg Fall risk, Mann assessment of swallowing ability, missed appointments, etc. for post stroke patients that were supported by the care manager)

>> Measure financial impact of care management model; for example, how preventative measures save the system money

>> Measure and improve patient satisfaction

RESULTS

Within a year, Allina was able to prove the value of this new care model for stroke through cost savings and, most importantly, through actual lives saved.

> **$350,000 saved over a one-year period.** These savings were realized through the care coordinator's

efforts resulting in reduced or eliminated need of services that would otherwise have been required by this patient population, including:

>> 7% reduction in hospitalizations

>> 7% reduction in hospital days

>> 46% reduction in emergency department visits

> **Saved and improved stroke patient lives.**

>> Mortality per 1000 strokes reduced from 36 to 0. Based on caseload of 400 patients in 2015, 14 fewer people died in the first 6 months after discharge.

>> Secondary stroke reduced 8%. Patients with care management services experienced an 8% less chance of a secondary stroke within 180 days of discharge.

WHAT'S NEXT?

With such impressive results, Allina plans to expand the Stroke Care Management Program and improve outcomes for more patients. Incidentally, this program has laid the groundwork for learning how to produce these outcomes at the lowest possible cost—an essential capability in the new era of value-based reimbursement. ⸙

REFERENCES

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